IV.—The Birds of Hong Kong, Macao, and the West River or Si Kiang in South-East China, with special reference to their Nidification and Seasonal Movements. By Lieutenant R. E. Vaughan, R.N., M.B.O.U., and Staff-Surgeon K H. Jones, M.B., R.N., F.Z.S., M.B.O.U.

(Plate IV.)

In no part of China have Europeans been permanently settled so long, and with no part so continually in touch, as with the littoral of the great south-eastern Province of Kwang Tung. It follows that a considerable number of naturalists have at various times visited Hong Kong, Macao, and the great southern metropolis Canton, together with their environs; and several ornithologists have added their quota to our information of the avifauna of the district.

The great naturalist Swinhoe * was at Hong Kong, and visited Canton and Macao, from February to May 1860, and contributed his results to 'The Ibis' in a charming and characteristic article, which, considering the time at his disposal, manifests that he displayed his usual energy in the pursuit of his favourite study.

Another naturalist, Mr. J. C. Kershaw †, who, although to some considerable extent an ornithologist, would perhaps consider himself to be an entomologist, has contributed a list of the birds of the Kwang Tung coast to this periodical. This list was regrettably curtailed by want of space, but is perhaps the most complete at present published.

The writers of the following notes have enjoyed exceptional facilities for observing the birds of this part of China over a considerable number of years, and of these they fully availed themselves. Ample leisure in the open air is essential to an understanding of the habits of the birds of any country, and this they have had.

^{* &}quot;Notes on the Ornithology of Hongkong, Macao, and Canton, made during the latter end of February, March, Apri and the beginning of May, 1860." 'Ibis,' 1861, pp. 23-57.

^{† &}quot;List of the Birds of the Quangtung Coast, China," 'This,' 1904, pp. 235-248.

The part of China dealt with in this article is contained in the provinces of Kwang Tung and Kwang Si, and lies just to the south of the northern Tropic line (see Plate IV.). The island of Hong Kong, a Crown Colony annexed in 1841, is bare, mountainous, and rocky in the higher portions of its surface, but, thanks to the foresight and protection of the British Government, remarkably well wooded, for the most part with fir-trees, on all its lower slopes.

The hills of the island do not rise to a greater height than about 1800 feet, and above the limit of the trees are generally covered with short wiry grass. The formation is chiefly granite, and in many of the ravines and valley-bottoms, and along the sea-shore in most places, there are blocks and boulders of this rock, often of titanic size and fantastic shape, which have been left where they lie by the gradual erosion of the softer parts of the original matrix. These great rocks are often piled together as if by some sudden cataclysm, and present absolutely inaccessible breeding-places for Myiophoneus caruleus and doubtless for other birds and small mammals.

On the northern side of Hong Kong is the city of Victoria, and a little to the east of it is the well-known Happy Valley, or Wan hai Cheong.

Opposite to Hong Kong is the Kowloon Peninsula, part of the so-called New Territory which was taken over by the British Government in 1899; it has an area considerably greater than 300 square miles, and forms a part of the mainland of China. The country about Eowloon resembles that of Hong Kong, except that, like most parts of the Chinese mainland in these latitudes, it is very poorly wooded. The trees are chiefly small firs, and from these the Chinese cut off the lower branches long before they have attained any size.

In the vicinity of temples and behind most of the villages are thick clumps of trees, chiefly False Banyans and various species of *Ficus*. Many of these trees are covered with strips of the common red lucky paper, though why, no one seems

quite to know; possibly it is in connection with some pre-Chinese superstition, adopted from the aboriginal inhabitants of the country. The hills on the mainland near Hong Kong run up to more than 3000 feet, but otherwise closely resemble those on the island.

The New Territory contains some very fine land-locked bays, of which Tolo Harbour, the largest, need only be mentioned.

The chief crop grown here, as elsewhere in Southern China, is rice, known to Europeans in the growing state as paddy. Except in certain flat portions of the country, to be mentioned presently, paddy is grown in areas of small size, terraced to suit the slope of the ground; each one of these is surrounded by a little clay or earthen rampart, which separates it from its neighbour, and contains water essential to the growth of the rice-plant.

These crops afford ample protection to many wading birds in the spring and autumn, and in the summer to certain of the Rails, but they are especially famous at the right season as the haunt of the migrating Snipe. Inland the Snipe specially favour the mulberry-canes in the spring and the paddy in the autumn.

In some parts of the New Territory a good many sweet-potatoes are grown and in some localities sugar-cane is not uncommon. Although all possible sites are cultivated with tireless industry, there remains, from the nature of the ground, a very large portion covered with grass, rocks, and serub.

Virgin forest exists in a few favoured spots on Hong Kong Island and on the mainland, and is very dense where it does occur.

About forty miles to the west of Hong Kong lies Macao, the oldest European settlement in China, which has been in the possession of the Portuguese since 1539. Here they are permitted to remain on suffrance by the Chinese.

Macao is situated on the seaward end of a peninsula which juts out into the bay of the same name in the form of a rocky ridge.

On one side of Macao the country is quite flat and covered with paddy-fields, but on the other is a range of hills, barren and rocky, like those of the New Territory across the water.

To the eastward of Macao is Moto Mun, one of the entrances to the Si Kiang or West River, and Moto and Kong Mun are two places on it, about thirty and sixty miles inland respectively, of which mention is made in this paper.

To the north-north-east of Macao is Wang Mun, another mouth of the West River.

Inland from Macao, towards Canton on the one hand and Samshui on the other, lies the Delta country. Except for an occasional small mound, in many cases artificial, and in others once a rocky islet in the estuary, this tract is entirely flat, and has been formed by the alluvium brought down by the Canton and West Rivers.

Throughout the Delta country a vast quantity of rice is cultivated in immense paddy-fields, whilst mulberry-canes, laichee and banana plantations clothe the banks of the creeks and rivers. This portion of the country is very densely populated with the most objectionable ruffians in China.

Above Samshui, which is a hundred and ten miles from the sea, is the Shiu Hing gorge, and from this point westward throughout Kwang Tung and into Kwang Si the physical conformation of the country is completely changed. The land is hilly and the river-banks are often very steep, bamboo and scrub abound, and the population is comparatively scanty. The valleys are often filled with extremely dense scrub, but large trees, except those unmolested for semi-religious reasons and those immediately about buildings, are scarce.

The finest trees in this part are a species of Bombax. which grows to a great height in favoured places, while pines (Pinus sinensis) also occur of considerable size, and are much patronized by various species of birds for nesting purposes.

Ornithologically the most interesting place on the West River is Howlik, some twenty miles above Samshui. this place there is an enormous Buddhist monastery.

situated halfway up a hill some 2000 feet high and surrounded by about four square miles of virgin forest, which is rigorously protected by the monks and forms a veritable haven of refuge for many species of birds.

Through the forest runs a little river, which attracts certain birds to its banks, and constant observation led to the conclusion that some five-and-twenty species are to be found here and nowhere else in the districts under consideration.

Originally, no doubt, the whole of this part of southern China was clothed with dense forest, but no plant capable of serving for fuel has any chance of survival with the Chinese, and it is only by a well-organized system of armed forest-guards that the monks at Howlik preserve their trees mtact. Above Howlik the type of country does not change until Kwei Ilsien in Kwang Si is reached, or for well over 250 miles.

Wuchau, about 110 miles above Samshui, is the most westerly point which has been under observation in the winter months, for during that time of year, owing to the fall in the river, gunboats are unable to proceed further inland.

At Kwei Hsien there is, for this part of China, a considerable plain, covered largely with grass and showing curious outcrops of carboniferous rock. Several species of birds adapted to such a habitat occur here and not elsewhere.

There is one other district which it is necessary to mention, and that is the North River, a tributary of the West River which draws its waters from the southern parts of the Provinces of Kiangsi and Hunan. Here the scenery differs from that of the Si Kiang or West River chiefly in the presence along its banks of numerous cliffs, on which, in places, Milvus melanotis and Corvus torquatus breed in suitable small outstanding bushes or on ledges of the rocks. This river was explored as far as Shau Kwan, about 150 miles from its junction with the West River.

The climate of this part of eastern Asia is, on the whole, hot and damp for seven months in the year, and dry and moderately cool for the other five.

The spring and early summer are, as a rule, very wet, and a rainy winter is by no means unknown. Really cold weather, when it does occur, is usually experienced in January and February, but does not last long.

It is, perhaps, rather colder and hotter inland than it is on the coast, but the difference is not very marked. Typhoons or hurricanes may occur during any month of the year, except, perhaps, in February, but are most frequent during the summer. These storms are extremely violent, cause tremendous destruction of life and property, and often have a marked effect on the migration of birds, and especially on that which occurs along the sea-coast.

The Chinese of the districts considered are astonishingly ignorant of the native wild birds, in which they contrast strikingly with their fellow-countrymen of the northern provinces. The only exceptions are the few native wild-fowlers to be met with on the river. For the most part, however, the Chinese prefer to trap those birds which are required for food.

Of eage-birds the Chinese are extraordinarily fond, and some species are brought from great distances inland down the river by junk, and others from distant parts of the coast in steamers, so that it is never at all safe to infer because a bird is seen in a fancier's shop at Hong Kong, Canton, or elsewhere that it was taken in the vicinity. Swinhoe apparently sometimes fell into this error. Local birds are probably, as a rule, captured as nestlings, especially Copsychus saularis and Trochalopterum canorum.

It is convenient in writing of the birds of this part of China to describe them as summer or winter visitors, or as spring or autumn migrants. It is not pretended that these various distinctions can be rigidly upheld, for some birds are partly resident and partly migratory, whilst of others, which are chiefly birds of passage, a few may remain for the winter or summer as the case may be.

By a resident species is meant one which spends the whole year in the district.

The majority of the birds observed are migrants from the

Palearetic region, on their spring and autumn passages, and a very large number of these come also under the head of winter visitors, as would naturally be expected in a district only just inside the Tropic.

Of resident birds there are a considerable number, and many of these, as, for instance, the White-eared Bulbuls, are also partly migratory.

Summer visitors are fewer than those in the other groups, but this, again, is to be expected of a region just within the Tropic.

The general character of the resident portion of the avifauna and of the summer visitors is of the same type as that of north-eastern India, Burma, and the Himalayas.

The birds of this region, as might be expected, shew a great affinity to, and in many cases are identical with, those of Fokien Province of the lower Yangtze, which have been so thoroughly and excellently worked out by Messrs. Rickett, Styan, and La Touche.

There is no doubt that with further and more exact observations by trained ornithologists the range of many species will be found to be much more extended than it is at present considered to be,

In this connection it may be said that collections of skins, made often by natives, although of very great value, and, indeed, indispensable in the present state of our knowledge, may undoubtedly give rise to false impressions as to the relative frequency of a species in a given area, or as to the nature of their occurrence there. The writers have on several occasions, in the earlier stages of their observations, been misled as to the frequency of certain species by exceptional migratory movements and rushes.

Matters which have become abundantly evident with prolonged observation are the extraordinary localization and the regular but minute movements of certain resident species in restricted areas—for instance, those of the Chinese Blackbird (Merula mandarina) at Macao.

In this part of China no new species were discovered, a

matter not entirely for regret and scarcely to be wondered at; but that there is variation among the resident birds in an area extending some 500 miles from east to west, is probable.

There still remains a great deal to be done in China in the way of field-work, and it must be many years before the life-story of a large number of the birds of that vast region is even approximately well known.

It is, for instance, very interesting to note the fact that several species of birds which are easily and abundantly observed on their spring migration were never seen on their autumn passage, and that in rarer instances the converse obtained.

Whether these species travel by different routes on the two passages, or whether all pass at night, without stopping to rest in the area under consideration, was not decided; there were, however, some slight grounds for the acceptance of the second suggestion.

In any case, it is extremely unlikely, considering the keen look-out which was kept on migratory movements, and the large amount of time spent in the field, that these birds simply escaped observation.

Field-notes made by two Naval Medical Officers, Staff-Surgeons J. P. H. Greenhalgh and C. E. Cortis Stanford, are embodied in this paper; the latter is a Member of our Union, and his collection of Chinese bird-skins is in the British Museum, Natural History; he has rendered much valuable assistance to the writers in the field.

In conclusion, it only remains for the writers to express their very great indebtedness to Mr. W. R. Ogilvie-Grant and the members of the staff of the Natural History Museum, who rendered them every possible assistance in the task of naming and arranging the specimens collected in China.

The nomenclature, unless otherwise stated, followed in this article is that of the 'British Museum Catalogue of Birds,' and the skins collected are deposited in the Natural History Museum. TRYPANOCORAX PASTINATOR.

The Eastern Rook occurs in the winter months near Wuchau, usually in association with Corvus torquatus. It is always in small flocks. Seven of these birds were seen below Wuchau on July 27th, and had either come south or were not breeding-birds. From April 22nd until May 2nd a small flock was at Wuchau. This species has been also seen at Howlik.

Corvus torquatus.

The Collared Crow is a common bird throughout the districts treated of in this article, but, curiously enough, is never found far away from water, either salt or fresh.

The food of this species consists of various forms of carrion, and includes defunct female babies (which are not very uncommon in China), fish, and the more easily obtainable forms of marine mollusca.

Like other Crows, the sexes pair for life and may be seen going about together in the autumn and winter.

During the winter months this bird, like the Rook, selects certain favoured roosting-places, and to these, at the close of the day, large numbers may be seen winging their way from the feeding-grounds.

The nest, which is small for the size of the bird, is composed externally of sticks or mulberry-canes, on which is laid a layer of mud or elay, and on that again a good thick felt of rags, fur, buffalo-hair, pandanus fibre, pinencedles, and so forth, forming a deep and warm eavity for the reception of the eggs.

The nest is preferably placed in an evergreen tree for its better protection, the Collared Crow being a very early builder, but it has been found in a bamboo amongst those of a colony of Night-Herons, and also in a fir-tree. Up the North River this bird has become a cliff-builder, nesting on ledges of rocks which overhang the stream. When placed in a tree near a Kite's nest, the possessors of the latter persecute the Crows unmercifully, as if they suspected them of egg-stealing.

Young birds have been found very early in February, so that at times this Crow lays at the end of December, but the majority of clutches are produced late in February or in March. It is possible that this species is sometimes double-brooded, and it is certain that it possesses a very strong affection for certain nesting-sites.

The eggs * vary in length from 1.95 to 1.50, and in breadth from 1.27 to 1.03, and average 1.66×1.15 .

Pica Pica.

Magpies are exceedingly common, both on the coast and up the rivers. They are less shy than at home, but do not return to a plundered nest very readily. They nest usually in a tall tree, but their great dome of sticks has been seen on the top of literary posts (which are erected in honour of scholars), once on the top of a pagoda, and three times in bamboos. One nest was seen which was only seven feet from the ground; this is most unusual in China.

The nest has the same sort of dome as in Europe, but, as thorns are less abundant, the usual prickly zareba does not occur to such a painful extent in Far Cathay as in the West. The nest of this bird seen in Europe is, as a rule, lined with roots inside of a mud coat, but in China, grass, hair, feathers, paper, wool, and, indeed, any suitable rubbish is employed.

In the autumn these birds form quite large flocks, and as many as sixty have been seen going to roost in a pine-wood at Samshui, and on one occasion forty-seven were put up out of a sweet-potato field.

At the end of December the flocks break up, and some pairs of birds begin to prepare for nesting before the new year; but, although they commence breaking off twigs early in January, they do not, as a rule, complete their nests until well on in February.

In some years, as late as the middle of March, about seventy-five per cent. of the nests examined contain no eggs, whereas in others the end of February sees most of them

^{*} All measurements of eggs are given in inches.

with full clutches. Fresh eggs were found, however, from February 5th to May 6th; and of thirty-one nests, three had eight eggs, seven had seven, seventeen had six, and four had five—six therefore is the usual clutch.

Urocissa erythrorhyncha.

The Chinese Blue Magpie is a very common resident at Hong Kong, where the amount of woodland is far in excess of anything to be found on the adjacent mainland, and where also there is practically no molestation. On the island of Hong Kong this species is not only abundant, but exceedingly tame and easy of observation. On the adjacent mainland, although it is present in the better wooded parts, it is never plentiful and very shy and wary.

This species is one which almost invariably goes about in small parties of four or more, and even in the breedingseason this arrangement holds good to some extent.

It is a bold and predatory species, robbing the nests of smaller birds of eggs and young on every possible occasion, and even attacking those of such large birds as its relative, the Common Magpie, which it was several times observed to do with success. So well are its thievish habits known to other species, that its appearance in the vicinity of their nests is invariably the signal for a general clamour, and most of them will boldly attack the robber.

Copsychus saularis, the Magpie-Robiu, always the boldest of the bold, will dash at the Blue Magpie even when at a distance of fifty yards from its nest, invariably driving it away. At times, all the three species of Hong-Kong Bulbuls combine and mob the would-be robber, and even the Chinese Dove (Turtur chinensis) attacks this bird, dealing very severe blows with its powerful wings in mid-air. Not only does Urocissa rob nests of their contents, but a party was seen to chase and catch a young Tailor-Bird (Sutoria) which was well able to fly.

The Blue Magpie is omnivorous; small reptiles and mammals, insects, various fruits and berries, and even rubbish from human habitations, form its very mixed

dietary. The flight is very graceful, especially when descending, the long tail streaming out behind seems to accentuate the gentle curves, which are its peculiar characteristic. When hopping about the branches of a tree the Blue Magpie looks rather clumsy, as if much incommoded by the inordinate length of its tail. On the ground this bird invariably advances by a series of clumsy hops, apparently it never walks, like the Common Magpie. When at rest in a tree or on the ground the tail is well folded, but on the wing the outer and shorter rectrices are invariably spread out, much to its advantage. The Chinese Blue Magpie breeds commonly at Hong Kong, though from the extent of the woods and the flimsy nature of its construction, the nest is very hard to find.

From the habit of going about in small parties it is difficult to say when pairing takes place, but the earliest nests are built at the end of March or the beginning of April, and breeding goes on through May, June, July, and August. It is undoubtedly double-brooded in most cases. The nest is a slight affair, made of thin twigs and lined with the aerial rootlets of the False Banyan tree and with finer twigs.

Almost always it is possible to see through the nest in every direction. In construction it is very flat and the central hollow containing the eggs is very shallow. A favourite nesting-site is the topmost twig of a thin sapling, but not infrequently the extremity of a horizontal bough is selected, and only once was the nest found in a strong fork near the main trunk. Firs are, perhaps, the favourites with this species, but a variety of deciduous trees has also been noted as used.

Both birds assist in building the nest, which is usually about twenty feet from the ground, and the young of a previous brood have been observed sitting round a nest in process of construction.

The bird, unless the eggs are very hard-set, usually slips from the nest without any demonstration, and then sometimes chatters from a distance or flies overhead scolding. When young are present, on the contrary, it may be very bold, swearing and scolding and coming so close that it could easily be struck with the hand.

The eggs are usually five in number, and have been described by Mr. La Touche, but two varieties require to be mentioned: one of these has the usual greenish-yellow ground thickly speckled all over with closely-set dark green spots of small size; the other has the specks distributed in the same fashion, but they are of a rusty-red colour, so that the general appearance of the specimen is rather like that of certain eggs of Merula merula.

Of all the Hong Kong birds, the Blue Magpie possesses the greatest variety of notes; these range from a flute-like whistle to harsh guttural cluckings, and at times almost amount to a song, being continued with various modulations for as much as five or ten minutes.

The bird is very noisy all through the year, though perhaps a little less so in May and June, when the breedingseason is at its greatest period of activity.

The earliest date at which eggs were found at Hong Kong was April 10th; in this case the eggs were well incubated.

Eggs vary in length from 1.22 to 1.04, and in breadth from .87 to .81; they average 1.16 × .83. An example will be figured on Plate V. fig. 17 of the April number.

DENDROCITTA SINENSIS.

The Chinese Hill-Magpie was only met with on one occasion, on November 20th, 1900, when a specimen was obtained at Shek-Wan opposite to Macao, just outside the British territory of Kowloon.

GARRULUS SINENSIS.

The Chinese Jay is not uncommon in the virgin forest at Howlik, which it visits at the period of spring migration; Mr. J. C. Kershaw obtained it at Macao, where it is rare.

ORIOLUS DIFFUSUS.

The Indian Oriole is a common summer visitor to the Delta country and to the West River, but was not seen on the island of Hong Kong.

They arrive about the 8th or 10th of April, and at once commence chasing one another, and uttering many and various courting notes, which are not heard after pairing has taken place, when they confine themselves to their sweet and flute-like little song.

The nests of this species are well known and do not need to be described; in Kwang Tung and Kwang Si they are usually placed in a Bombax or a fir-tree, but not infrequently in a Banyan, always at a considerable elevation, and at the outer extremity of a thin branch, where they are most difficult of access.

The eggs are to be found, as a rule, in the third week of May, but occasionally much earlier, and a pair in the Yamen at Samshui had young a week old on June 1st.

On one occasion a male was seen to fly to a stump, from which he tore off strips of bark and carried them away.

These birds are very truculent, and the pair in the Samshui Yamen wage incessant war on the Chinese Blackbirds, which build in the same tree.

It is doubtful whether two broads are reared, but fresh eggs have been found as late as July 5th. The usual clutch is four eggs; often three, and sometimes only two are laid.

The old female sometimes assumes the colouring of the male, and a pair, both with the brilliant plumage of the cock, were seen to have a nest.

In the third week of August the Orioles take their departure, but an occasional bird may be seen as late as September 28th, whilst on rare occasions an individual will spend the whole winter in Kwang Tung.

The eggs of this species average 1.13×80 , and they vary in length from 1.75 to 1.06 and in width from 87 to 77.

CHIBIA HOTTENTOTTA.

These Drongo-Shrikes are summer visitors to the forest at Howlik in Kwang Tung, the only place in that province where they occur, but they are common enough in Kwang Si, especially at Kwei Hsien. They arrive about the third week in April, and have disappeared from Howlik by the last week

of August, but they have been seen at Macao and Wuchau in September and October. They are very noisy, calling loudly to one another, especially after the young are able to fly.

The nest is an exceedingly flat and flimsy affair, attached to a fork at the very end of a slender horizontal bough, at heights which vary from fifteen to forty feet, and in such a position is sometimes quite inaccessible. It is made of grass and lined with fine grass or roots; the rim is the most substantial part of it and the eggs or young can usually be seen through its bottom.

When the nest is approached the birds are very fearless, dashing round the tree and in and out among the branches.

They commence to lay early in May, and young birds have been found early in June; three is the usual clutch, but four have been found; one brood only is reared.

These birds catch insects on the wing, and hawk until quite dark; they drink also during flight like Swallows.

Eggs vary in length from 1.15 to 1.03 and in breadth from .83 to .79, and eight eggs average 1.08 × .81. (See Plate V. fig. 16 of the April number.)

BUCHANGA ATRA.

The Black Drongo-Shrike is a common summer visitor to Kwang Tung, but there, with one exception, it is confined to the coast; it does not occur in Kwang Si, where *Chibia hottentotta* replaces it. Away from the coast this species occurs only at Tak Hing, on the borders of Kwang Si Province—a very curious distribution.

The first arrivals in the spring are met with about the middle of April, and by the end of that month they are plentiful, but only on the coast. Of those returning from further north, the third week in September sees the first arrivals, but plenty continue to come in through October, and some have been occasionally met with in November and even in December; but this last date is unusual.

The cry of this bird is very harsh and is constantly indulged in. They are very fierce, dashing in a bullying way at various other birds, and mobbing such inoffensive species as the Smyrna Kingfisher. They catch their prey

on the wing, and hawk for it until quite dark, and they have been known to capture such a nauseous insect as *Euplwa* superba.

This species begins to build its nest early in May, and eggs have been taken from the third week of that month until the second week in June. The nest is usually placed, like that of Chibia, at the extremity of a horizontal bough, but not always, and an upright fork is sometimes used. When building on a horizontal bough they begin by making the outside rim, joining the two prongs of the fork first—the one away from the trunk, that is to say. The nests are made of grass or of lichen, and sometimes, as at Hong Kong, of the aerial rootlets of the banyan-tree.

Although not so flimsy a nest as that of *Chibia*, it is still sometimes possible to see the eggs through the bottom. These are three or four in number. In the nest of this species *Cucuius micropterus* lays its eggs at times, as is noticed elsewhere.

The eggs are reddish pink in colour, spotted with ash and reddish brown, chiefly at the larger end, and vary in length from 1.14 to .92, and in breadth from .83 to .70: they average $1.02 \times .75$.

BUCHANGA CINERACEA.

The Ashy Drongo-Shrike is found as a summer visitor at Kwei Hsien, where it breeds, and it was once noticed at Tak Hing in Kwang Tung.

An old nest found at Kwei Hsien was made of grass and constructed like that of *Buchanga atra*.

The note of this bird is loud, metallic, dissyllabic, and quite unmistakable. On February 16th, 1908, one of these birds arrived at Hong Kong, and remained there until the middle of April, in the vicinity of the Naval Hospital and Happy Valley. This is the only occasion on which this species was ever seen in the island, which is some hundreds of miles from its usual habitat.

BUCHANGA LEUCOGENYS.

This Drongo-Shrike is a summer visitor, and breeds only at Howlik Forest, where it is rare. It was seen at Macao

on April 22nd, at Howlik on the 21st, and also up the North River on May 1st, 1905, on migration.

On May 22nd a nest of this bird was found at the extremity of a horizontal bough of a pine-tree, twelve feet from the ground. It consisted of a ring of lichen and strips of fine bark matted together with cobwebs and a cup lined with fine pine-needles; it contained three fresh eggs, and the bird flew down on to the ground and laid a fourth whilst under observation.

A second clutch of three eggs slightly incubated was found on June 16th at the same place.

On May 26th after heavy rain, winged termites began to fly between 6 P.M. and 8 P.M. and continued to do so for some days: each night these were hawked for in the dark by Chibia hottentotta, Hirundo striolata, and the present species.

This Drongo was not observed passing to the south on its autumn migration, as was the case with several other species.

Four eggs vary in length from '95 to '89 and in breadth from '70 to '64, and average '91 × '68. (See Plate V. fig. 12 of the April number.)

CAMPOPHAGA MELANOPTERA.

This Caterpillar-eater is a summer visitor, and, as a rule, arrives late in April and leaves again about the middle of August. On October 14th, 1906, a bird of this species was observed for some hours at the Naval Hospital, Hong Kong; probably it had strayed from the rest of its kind on migration.

They breed on the West River, and commence to build their nests early in May. These are very beautifully made and are exceedingly small for the size of the bird; they are constructed of lichen matted together with cobwebs, and sometimes, but not always, lined with fine grass; they are usually situated at the extremity of a slender horizontal bough and are well concealed.

This bird is double-brooded, second clutches being found at the end of June and early in July.

Both sexes incubate the eggs, for one was seen to go to a nest, peck the individual in occupation, and having turned it off, to settle down on the eggs itself. Also eggs are laid at times in nests not finished, and the bird has, whilst sitting, been observed to be smoothing the edge of the nest, but as this was late in the season perhaps haste was necessary and eggs were laid before the nest was completed for that reason.

The first clutch usually contains four eggs, the second

not more than three and often only two.

The bird was last seen on August 19th at Howlik. The latest eggs were taken on July 7th.

Eggs vary in length from '99 to '86 and in breadth from '73 to '66, and average '94×'70. An example will be figured on Plate V. fig. 11 of the April number.

Pericrocotus speciosus.

On January 1st, 1906, at Fu Wau, about ten miles from Sam-shui, a single bird of this species was seen amongst some pine-trees. A fortnight later, at the foot of the hill at Howlik, a party of these birds was noticed accompanied by one male *Pericrocotus brevirostris*. Three *Pericrocotus speciosus* and the specimen of *Pericrocotus brevirostris* were obtained.

On February 8th, 1906, in the British Yamen, in the heart of Canton City, one of these birds was seen.

This Minivet does not show the same partiality for the tree-tops as *Pericrocotus griseigularis*, and two were shot less than ten feet from the ground. They are very restless birds, hovering for a moment before a leaf or a berry; they pick off from it their insect prey, then fly to a branch from which they again dart off in further search of food. The crops of those examined were full of insect-remains, beetles, grasshoppers, &c.

None of the birds observed on the West River uttered any note.

PERICROCOTUS BREVIROSTRIS.

A male of this handsome Minivet was obtained from among a flock of female P. speciosus, as has just been

mentioned. The bird was quite silent, and its crop was full of insect-remains. It was rather far to the eastward of its habitual range, and may be considered a very unusual winter visitor.

Pericrocotus roseus.

This Minivet is a summer visitor to the Kwang Tung coast and the West River, but, as a general rule, it does not stay to breed in Hong Kong or the Kowloon Peninsula. The earliest arrivals come in about the first week in April, and by the middle of that month there are a great many, chiefly in pairs.

Their screeching is unmistakable and is only practised when they are in the air. When, as happened at one locality, there are some superfluous unpaired males, the latter attach themselves to one of the pairs, and all three can be seen flying together screaming.

On one occasion when young were about, a male of this species was observed to sham being wounded and to fall a distance of thirty feet into the mulberry-canes.

At times this bird may be seen to perch lengthwise on a bough instead of across in the usual manner.

Nest-building commences about the third week in April, and eggs can be found all through May and sometimes in June and July, but it is doubtful whether a second brood is often attempted. The nest is a beautiful structure, small for the size of the bird, and, although not carefully hidden, most difficult to see; it is placed sometimes on an upright fork and sometimes on a horizontal limb, but never much more than thirty feet from the ground and often a great deal less.

The birds themselves, however, prefer the tops of the highest trees. Banyans and firs are rather favourite trees for nesting-operations.

The eggs are usually three, but four have been found. They are of a greenish-white colour, spotted rather sparingly all over with ashy, yellowish, and purplish brown, chiefly round the larger end; the markings may be massed together and over-spotted with darker brown.

When the hen is sitting the male keeps watch in a neighbouring tree and gives her timely warning of an intruder's approach, when she silently slips off her eggs and joins him in the air.

Eggs vary in length from $\cdot 82$ to $\cdot 74$ and in breadth from $\cdot 62$ to $\cdot 58$; they average $\cdot 77 \times \cdot 60$. An example will be figured on Plate V. fig. 6 of the April number.

Its food is chiefly insects with occasional green seeds.

Pericrocotus griseigularis.

Small flocks of this species occur every winter at Howlik, but nowhere else in Kwang Tung or Kwang Si; they consist almost entirely of females and confine themselves to the tree-tops. These Minivets have been observed to hover before berries, after the fashion of *Phylloscopus proregulus*, and their food, as demonstrated by their crops, appears to be partly seeds and partly insects.

Pericrocotus cinereus.

The Ashy Minivet occurs only on passage during the spring and autumn migrations, and is much more easily observed on the former.

About April 5th a flock is always to be seen on a certain clump of trees at Samshui; many of these are immature and most of them are females; they are very silent, perhaps because of the scarcity of males, and they soon pass on to the north again. Up the North River a few of these birds were seen in May, but apparently they were not breeding.

At the end of October and early in November a small party has been seen at Samshui, passing south, but in all probability most of them go through at night. They fly high at this time of year, and are in haste to be gone.

HEMICHELIDON GRISEISTICTA.

Muscicapa griseisticta (Swinh.); Sharpe, Cat. B. M. iv. p. 153.

This little Flycatcher passes through in October and May on its migratory journeys, and has been seen as early as the 9th of the former and as late as the 17th of the latter month.

Although a common bird, this species is always outnumbered by Alseonax latirostris in the proportion of five to one, and unlike the latter does not dawdle on its passage but hurries through and is often found in company with the larger Phylloscopi. This bird has the typical Flycatcherhabit of dashing at an insect from a selected perch, to which it invariably returns.

HEMICHELIDON FERRUGINEA.

This Flycatcher is a rare bird of passage, and has only been obtained three times (twice on April 6th and once on April 10th) at three widely separated stations (Macao, Mirs Bay, and Samshui).

ALSEONAX LATIROSTRIS.

These are the most abundant of the Flycatchers which pass through on migration, and they have been seen from April 16th to May 24th, and from August 31st until November 22nd, dawdling through in small parties and remaining for ten days or a fortnight before moving on, whether they are proceeding to the north or the south.

Occasionally an individual remains at Hong Kong for the winter.

In habits this species closely resembles Hemichelidon griseisticta, and, like it, is invariably silent.

SIPHIA ALBICILLA.

Muscicapa albicilla Pall.; Sharpe, Cat. B. M. iv. p. 162.

A small party of these birds passed through Samshui on migration on April 6th, 1907. Another haunted a stream near the Naval Hospital at Hong Kong for some days in the spring of 1903.

CYORNIS HAINANA.

Cyornis hainana O.-Grant, Bull. B. O. C. x. 1900, p. 36.

Numbers of these Flycatchers pass through on migration from March 25th until the end of April and again in September, but a few remain to breed at Howlik and also in Kwang Si, whilst an occasional bird has been observed during the winter months at Macao.

The male sings a sweet and powerful song throughout the day during the breeding-season; it resembles that of Copsychus saularis, but is even better—though not improved by an occasional metallic "click"; it also possesses a "teck! teck!" note, not unlike that of a Phylloscopus.

A male of this species was seen to attack and drive away Amaurorais phanicurus at Howlik on May 21th; probably the nest was not far off, but unfortunately was not found.

Poliomyas Luteola.

This species passes through in the spring in small numbers, the earliest and latest dates on which it was observed were April 2nd and 17th respectively. Doubtless it returns in the autumn, but the closest scrutiny has failed to observe it on the passage south. This is the case with various other species, and although it is possible that they follow a different route on the return journey, it is perhaps more probable that they travel only at night.

These birds for the most part keep to the coast-line, but they were obtained as far inland as Samshui, which is about a hundred miles from the sea.

XANTHOPYGIA NARCISSINA.

The Narcissus Flycatcher is a common spring migrant, arriving as early as March 28th and leaving as late as May 4th, but it is most abundant during April, and, like sundry other species to which allusion is made in this paper, has not been observed on the autumnal journey.

Although these birds have a partiality for the shade of woods and for bamboo-groves, their colouring is so conspicuous that they are not easily overlooked, and, if scarcely to be described as gregarious, they are inclined to be sociable and are usually seen in small parties. When looking for insects they keep, as a rule, much nearer to the ground than other Flycatchers, but like them they utter no sound.

XANTHOPYGIA TRICOLOR.

This Flycatcher is another of those species which have only been observed on the spring migration, and although not common it is liable to be mistaken for *Xanthopygia narcissina*. Arriving during the last ten days of April, this bird passes through some three weeks later than *Xanthopygia narcissina*.

When hovering low down, close to the water, among scrub and undergrowth, this species with its black plumage and white alar speculum has a considerable resemblance to a butterfly, the yellow rump being inconspicuous.

IANTHIA CYANURA.

Tarsiger cyanurus (Pall.); Sharpe, Cat. B. M. iv. p. 255.

This little bird is a common winter visitor, arriving early in November and leaving again towards the end of March; it is generally distributed both on the coast and inland, and in both the Kwang Provinces.

Extremely tame, this species inhabits woods and groves of bamboos, where it obtains most of its food upon or close to the ground, and is only very rarely seen at any height above it. In a dim light it is possible to mistake *lanthia cyanura* for a female Redstart, for like the latter it is affected with "shivering fits."

CYANOPTILA BELLA.

Xanthopygia cyanomelæna (Temm.); Sharpe, Cat. B. M. iv., p. 251.

This beautiful blue Flycatcher is an exceedingly common bird of passage during the spring migration, not only on the coast but inland, and in Kwang Si as well as in Kwang Tung. Although seen as early as March 22nd, the main body arrives in April, and until the end of the third week of

that month they abound everywhere, fresh flocks continually arriving to take the places of those that have moved on.

As in the case of certain other species, these birds have never been observed during their return journey. Whether they travel south by a more westerly route, or whether they make the autumnal migration entirely at night, is still unknown; but if they did occur, it is highly improbable that such strikingly handsome Flycatchers would be overlooked.

OREICOLA FERREA.

The Iron-grey Bush-Chat is a rare winter visitor; one was obtained on January 29th, 1903, at Kowloon and another at Howlik on January 10th.

HYPOTHYMIS OCCIPITALIS.

This species was found abundantly in the woods at Kwei Hsien, in central Kwang Si, where it evidently breeds. It is rather like a Flycatcher in its habits, dashing out to catch an insect under the shade of the foliage and returning to its original perch when the capture has been made. On July 15th one of these birds was observed singing a few brief notes and shivering its wings.

At Kwei Hsien there were plenty of young birds about; they are dark brown above and white underneath. The beautiful silvery cobalt-blue of the adult unfortunately fades after death.

On August 14th a considerable number were seen at Tam Chau, and Mr. J. C. Kershaw has noticed this species every year at Macao as it passes through on migration.

PRATINCOLA MAURA.

The Indian Stonechat is one of the commonest winter visitors to south-eastern China, arriving about October 12th and leaving again between the end of March and the end of April; during the last-uamed month its numbers continually diminish and are not replenished from districts further south.

In habits this bird exactly resembles *Pratincola rubicola* of western Europe, and perched on a small bush it utters a

loud "tack! tack!" then, flying close to the ground, seeks a fresh eminence and repeats its cheerful call.

Early in the morning, whilst it is still dark, this bird sings a little song, but after sunrise it remains silent, except for its usual "tack! tack!" As is the case with many other winter visitors to this part of China, the majority of these birds are immature.

TERPSIPHONE INCIL.

The Chinese Paradise Flycatcher is partly a bird of passage and partly a summer visitor; it was seen at various places on passage in April and September, whilst of three nests two were found in May and one in July.

This species is commoner in Kwang Si than in Kwang Tung, but it is only up the North River that males in the white phase of plumage were found breeding.

One skin, in white plumage, has faint traces of chestnut on two of the long tail-feathers.

A nest was four inches deep and three across, shaped like an inverted cone; it was built into a fork of a tree, the apex of the cone downwards, and was composed of moss, grass, vegetable down, spiders' cocoons, strips of old paper, and strips of bark loosely felted together with cobwebs. It was lined with fine grass.

Nine eggs average '80×'56, and vary in length from '82 to '74 and in width from '60 to '54. An egg will be figured on Plate V. fig. 10 of the April number.

TERPSIPHONE PRINCEPS.

This beautiful Flycatcher is a regular migrant, passing through during the first half of April on its way north, and returning from the end of August until the middle of September; but unlike *Terpsiphone incii* it keeps to the coast for the most part, and has not been seen more than a hundred miles inland.

These birds make their spring journey at the wettest time of the year, when torrential tropical rains often pour down for days on end; and how they succeed in keeping their enormous tails dry, or how they steer with them in high winds, or how they make their way about in the dense undergrowth, are all problems, but undoubtedly they achieve these undertakings with complete success.

CULICICAPA CEYLONENSIS.

The Grey-headed Flycatcher occurs only as a winter visitor to Howlik; this is a considerable extension of its range to the eastward.

Seen among the tree-tops, this species may be very easily mistaken for one of the smaller *Phylloscopi*. It is very tame and has a sweet, shrill, and rather loud trill, and in its habits closely resembles *Alseonax* and *Hemichelidon*.

Скуртогорна терикосернага.

Cryptolopha affinis (Horsf. & Moore); Sharpe, Cat. B. M. iv. p. 398 pt.

The Flycatcher-Warbler is rather a rare winter visitor, in habits somewhat resembling *Phylloscopus superciliosus*, and like the latter is given to assuming the inverted position on a tree-trunk, and to hovering before a leaf on which insects are to be found; it, however, possesses a much sweeter note and a decided fondness for dense undergrowth.

This bird was only observed at Macao and in the forest at Howlik.

STOPAROLA MELANOPS.

This Flycatcher undoubtedly breeds in the woods of the monastery at Tam Chau, in Kwang Si, for on August 15th a male and an immature bird coloured like the adult, save for a brown-spotted throat, were shot, while a third was seen but not obtained.

In habits they do not differ from other Flycatchers of south-east China, but they were not heard to utter any note.

This species has also occurred in the spring at Macao.

PHYLLOSCOPUS BOREALIS.

Eversmann's Willow-Warbler must be looked upon as an irregular bird of passage, and like *Phylloscopus xanthodryas* is confined to the Kwang Tung littoral. Immense

numbers of these little birds occurred in May 1907, about the middle of the month, and the stunted fir-trees on the hills about Macao were crowded with them for a week, after which they all disappeared.

PHYLLOSCOPUS XANTHODRYAS.

This Willow-Wren may be regarded as an accidental bird of passage, for it was only observed in September 1907, and was then confined to the coast, where quite an invasion took place.

Unlike most of the genus, this species loves to skulk in thick cover, whence it is with difficulty dislodged.

The note of this bird is a loud and distinct single "chink," easily distinguishable from the "teck! teck!" of *Phylloscopus superciliosus* and much like that which *Alcedo bengalensis* utters on taking to flight.

PHYLLOSCOPUS TENELLIPES.

This Willow-Warbler is a bird of passage both on the Kwang Tung littoral and inland, and was observed in April and early in May on the way north and on the return journey during September, but it did not linger on either. It is fairly abundant, and displays, like *Phylloscopus wanthodryus*, a partiality for the undergrowth of the small woods; its note is a very metallic "click."

PHYLLOSCOPUS OCCIPITALIS.

The Large-crowned Willow-Warbler is a very common bird of passage, and numbers were observed from April 4th to May 16th, and again from August 15th until the end of September. On one occasion this bird occurred at Macao on March 30th, and it is found in Kwang Si as well as in Kwang Tung.

The birds, usually in small parties, frequent open bushes as well as the tree-tops, and often hover in front of a leaf or flower whilst they pick off an insect.

Phylloscopus superciliosus.

The Yellow-browed Willow-Warbler is the commonest of all the Willow-Warblers in Kwang Tung during the

winter months; it arrives during the third week in September and leaves again in April. An exceptionally late individual has been seen early in May.

In company with *Phylloscopus proregulus*, *Sutoria*, *Zosterops*, and other small birds they are to be seen everywhere searching diligently for food, and are often observed hanging on to the trunks of the trees head downwards, after the fashion of a Tit.

The feathers of the head and neck are moulted in March, and the little song is to be heard at the end of that month.

PHYLLOSCOPUS PROREGULUS.

Pallas's Willow-Warbler is a common winter visitor; it arrives in October and leaves again in March, the latest date recorded being the 26th of that month.

This is an extremely tame little bird, much resembling the Gold-crest in its habits. Haunting the tops of the trees it hunts for its insect food all day, often hovering Humming-bird fashion whilst it picks its quarry from a leaf; it is never still for a moment.

In March they begin to moult the feathers of the head and neck, and during the latter part of the month commence their sweet and rather loud little song.

ACROCEPHALUS BISTRIGICEPS.

This Reed-Warbler appeared suddenly in May 1906, and swarmed for ten days in the reeds on every creek and waterway of the Delta country.

Some individuals also patronized the bamboos and all were in song and very noisy. The song, which was voiced very lustily, is rusty and creaky, and seems to be accentuated during heavy tropical rain.

After remaining some ten days the birds moved on and were never seen again. The unusual occurrence of this species which, as a rule, does not rest on migration is inexplicable to the writers.

ACROCEPHALUS ORIENTALIS.

The Chinese Great Reed-Warbler occurs on the Kwang Tung coast and on the West River as a bird of passage during the spring and autumn migrations. It passes through in a very leisurely manner, and shews more inclination for mulberry-canes and bamboo-scrub than for actual reeds, especially in the autumn.

The earliest date for spring migrants was April 22nd, and many were in the reeds and in full song from May 3rd to May 8th, the last was seen on the 16th of that month.

From September 5th until October 24th they were observed on the West River passing south.

LOCUSTELLA CERTHIOLA.

Pallas's Grasshopper-Warbler has been observed at Samshui from September 6th until October 15th, and it has also occured at Macao and Wuchau.

This bird, as is well known, is a great skulker and difficult to flush from the paddy; when put up it drops again and threads its way with astonishing rapidity through the stalks to rise once more well ahead of the place in which it alighted. It is never seen on its spring passage, but at that time the paddy-fields are all hard, dry, and bare and would offer it no cover at all. At this season the Snipe, whose habitat *Locustella* favours in the autumn, migrate to the mulberry-canes, but this little bird was never found there with them.

Possibly this species travels to the north by a different route from that by which it journeys south.

LOCUSTELLA LANCEOLATA.

This Grasshopper-Warbler was only obtained once, October 28th, 1907; but it is quite possible that this species may have been confused with Locustella certhiola, both being such confirmed skulkers and very difficult of observation.

Lusciniola fuscata.

A common winter visitor, seen as early as September 30th and as late as May 9th, this little bird has a strong liking for hedgerows, bushes, and every form of undergrowth, but may also be seen, on occasion, in the open beside a pond or in the paddy-fields, and although not actually sociable a good many can be sometimes found in the same plantation.

At Samshui, on May 4th, there was an influx of this species on migration, many were in song, and all passed through without lingering.

Exceedingly tame, this little bird will approach very closely to an immobile observer.

Individuals vary much in size, and six specimens measured from $5\frac{1}{4}$ inches to $4\frac{1}{2}$ inches in length.

CETTIA PALLIDIPES.

A specimen of this species was obtained at Macao on March 12th, 1907, but was not recognized as such until the collection was being worked out in London.

CETTIA SINENSIS.

Cettia sinensis La Touche, Bull. B. O. C. vii. 1898, p. 37.

This Warbler occurs during the winter months in small numbers, and frequents the same localities as Lusciniola fuscata, which species it strongly resembles both in appearance and habits. It arrives in November and leaves again in March, and whilst creeping about in the undergrowth, either singly or in pairs, it emits an indistinct grating note.

CETTIA CANTURIENS.

Although this bird, which arrives in October and remains until May, and sometimes until late in that month, is regarded as a winter visitor, it is possible that occasionally it remains to breed.

A female, which was thought to be a distinct species by Swinhoe on account of its much smaller size and was described as Arundinax minutus, was obtained on January 3rd, 1906, when it was in company with some Lusciniola fuscata, at the edge of a pond among bamboo-scrub.

This species, like many others of the smaller birds, has the greatest liking for the densest undergrowth, which it leaves with reluctance and to which it darts back again on the slightest provocation, or on no provocation at all. It hops restlessly from twig to twig whilst searching for food, and it possesses a sweet bubbling little song that may be heard in February and March, but it also has a harsh "burr," not unlike that of *Dryonastes perspicillatus*.

GEOCICHLA VARIA.

White's Thrush is only found in Howlik Forest, where a few spend the winter; from their great shyness they are rarely seen, though occasionally heard. Mr. J. C. Kershaw, however, heard them on the Lo Fu Shan Mountains, near Canton.

MERULA MANDARINA.

The Chinese Blackbird is a resident species, but is subject to a curious seasonal movement, for it is only during the winter months that it is found at Macao, where it is common, and at Hong Kong, where it is scarce. It breeds abundantly at Kong Mun, which is only fifty miles away from the former, and thence up the West River and inland.

On January 1st, 1906, at Fu Wan, fifteen miles below Samshui, where there is a great deal of wood, a flock of over twenty Blackbirds was seen: a most unusual thing. There was a fresh north wind blowing and it was very cold-Several smaller flocks were seen, so perhaps they were small parties migrating.

It usually places its nest on a horizontal bough against an upright fork of a banyan-tree, and at a considerable height from the ground.

About the end of April fresh eggs may be looked for, and as many as six clutches were taken on April 16th from the Magistrate's Yamen at Samshui.

The usual clutch is five, but four is not uncommon, and one of six was found on three occasions.

Eggs are met with until the middle of June, for this

species is double-brooded, and it is especially among second layings that four eggs are to be noticed.

Two nests of this species were found in abnormal situations, one on the top of an old nest of *Graculopica* and one in a disused nest of a Crow.

Eggs average 1.10×83 , and vary in length from 1.25 to 1.06 and in width from 91 to 78.

MERULA CARDIS.

The Japanese Thrush is a regular but not a very common winter visitor, and during April the number is increased by a small stream of migrants from further south.

In habits, and especially in its alarm-note, this bird closely resembles the European Blackbird.

MERULA HORTULORUM.

Swinhoe's Thrush is much the commonest species of the genus; it occurs as a winter visitor. Arriving as late as the middle of November and not departing until the first week of May, this bird affects woods and groves of bamboos, where it searches diligently for food among the dry and fallen leaves, sending them flying in all directions and making as much noise as a Chinese leaf-gatherer with his wooden rake. When disturbed, it utters a whistling or whirring note.

Many of these birds are immature, and the amount of chestnut-colour on the underparts and axillaries varies considerably.

MERULA CHRYSOLAUS.

This is an accidental winter visitor. One example of this species was obtained on April 6th feeding among the mulberry-canes upon the ground in company with *Turdus hortulorum*.

LARVIVORA SIBILANS.

Erithacus sibilans (Swinh.); Seebohm, Cat. B. M. v. p. 297. This may be an unusual winter visitor or a rare spring migrant, and one only was obtained, on April 1st.

This bird keeps to the undergrowth and close to or actually upon the ground, and it has the Redstart-like habit of flirting the tail and of shivering.

Calliope Camschatkensis.

Erithacus calliope (Pall.); Seebohm, Cat. B. M. v. p. 305. The Siberian Ruby-throat is rather a rare winter visitor, but it has such very skulking habits that it is seldom seen. One was shot at Kong Mun from a boat in mistake for a rat, as it was running among some reeds close to the water's edge. It is a favourite cage-bird among the Chinese, both at Hong Kong and Canton.

CYANECULA SUECICA.

Erithaeus caruleculus (Pall.); Seebohm, Cat. B. M.v.p. 308. The Red-spotted Blue-throat is a winter visitor to the two Kwangs, arriving September 1st and leaving again in February, March, and sometimes as late as mid-April.

Owing to its skulking habits and preference for the marshland, this species is not much in evidence and those obtained were shot whilst working the Snipe-marshes. Here they rose under the feet to drop again almost immediately, so that energy and ability were required in beating them out of cover, and in spite of much effort they not infrequently escaped.

RHYACORNIS FULIGINOSA.

Xanthopygia fuliginosa Sharpe, Cat. B. M. iv. p. 253.

The Plumbeous Redstart is a common winter visitor, and occasionally a pair remain to breed, but the majority seem to be immature.

For the most part these birds haunt the rocky mountainstreams, but they are occasionally seen by ponds or on the river-banks.

This species arrives in August, and on April 10th all the winter visitors had left. On April 22nd a female was observed feeding three young at Howlik, which were well able to fly, and as the bird is known to nest on the banks of streams in India, these had doubtless been hatched close by.

Monticola solitarius.

The Red-breasted Blue Rock-Thrush is a common winter visitor to Hong Kong and the Kwang Tung coast generally, and goes inland to the borders of Kwang Si.

The numbers of this species vary considerably in different years, sometimes a great many remain all through the winter months, and in other years all seem to pass rapidly through. At first these birds shew a tendency to hang about the seashore, but they soon betake themselves to woods and gardens and are not shy.

From about the middle of October and until the middle of November there is a considerable influx of these birds, and they were seen as late as May 11th at Hong Kong. It has been stated that this species sometimes breeds near Macao and at the Marble Rocks, Samshui, but no eggs were taken by the writers.

MONTICOLA CYANUS.

The Blue Rock-Thrush is perhaps rather more common than the red-breasted form, and most that applies to the one does so to the other, but it does not occur inland. There is no doubt that in some years birds with blue breasts are more common than birds with red, and also that the former tend to arrive at different times from the latter; but, on the other hand, it also happens that birds of all grades of red and blue colouring may occur in the same rush of migrants.

This bird is as tame as the other Rock-Thrush, and may often be seen perched on houses and railings, shewing rather a partiality for the vicinity of human beings.

RUTICILLA AUROREA.

The Daurian Redstart is a common winter visitor to the Kwang Tung coast, but its numbers vary considerably in different years. The earliest date in the autumn on which this bird was seen was October 30th and the latest in the spring March 24th.

This bird has the habit of shivering its tail from side to

side, like the common European Redstart, and it utters a feeble whistling call as well as a sound resembling the tapping together of two pieces of hard wood.

HYPSIPETES LEUCOCEPHALUS.

This Bulbul was observed on three occasions only: on April 29th, 1905, up the North River a flock of a dozen were encountered, and on February 25th, 1905, and January 3rd, 1907, single birds were shot on the West River, so that this species is an accidental visitor.

HEMIXUS CANIPENNIS.

Hemixus canipennis Seebohm, P. Z. S. 1890, p. 342.

This Bulbul only occurs at Howlik Forest during the winter months, when it is to be met with in small flocks, feeding on berries in the tree-tops. In general habits it resembles other Bulbuls, but has a different call to any of the commoner species.

The only examples obtained were collected in the month of January.

PYCNONOTUS ATRICAPILLUS.

The Chinese name "Ko-Kai-Kwun" means "with the high-crested hat."

This Bulbul occurs on the coast and inland, but always shews a decided preference for sparsely wooded hills and for localities at a distance from human habitation. This species has a cheerful ringing call. It is partly resident and partly migratory, and in the autumn and spring large flocks are often seen.

The food consists partly of seeds and berries and partly of insects.

The Black-headed Bulbul invariably attacks the Chinese Blue Magpie (*Urocissa erythrorhyncha*) whenever that marauder approaches its nest, and with much clamour and great valour always drives the thief away.

The nest, a flimsy structure, is usually placed in a fir-tree, and often at a considerable elevation.

The eggs vary from two to six in number but are usually three or four, and are of the common Bulbul type.

This species, like the other breeding Bulbuls, is double-brooded.

Eggs vary in length from '94 to '77, and in breadth from '70 to '63; they average '89 × '65. (See Plate V. fig. 21 of the April number.)

Pycnonotus sinensis.

The Chinese name is "Pak Tau Long," i. e. "the white-headed fellow."

The White-eared Bulbul is the commonest of the three breeding Bulbuls found in the area under discussion, and is equally abundant on the coast and inland. It has a partiality for the lower levels, for cultivated land, and for the neighbourhood of houses and gardens.

In the winter months the numbers of this species are largely augmented by the arrival of migrants from further north, and in November and December considerable flocks are seen, and again, in March and April, when many move away for the summer. During the rest of the year they are seen in small parties or in pairs.

The bird has a small and very monotonous song, which it continually repeats at all times of the year, and perhaps more persistently during the summer months.

The food consists partly of insects and partly of seeds and berries, but this Bulbul is almost omnivorous. It captures insects in the air exactly after the manner of a Flycatcher, returning always to the perch from which it started.

The nest is a slight affair, somewhat resembling that of a White-throat, and usually light can be seen through the bottom. It generally contains some wild cotton, and is sometimes lined with fine grass and sometimes with horsehair; it is placed in a bush or tree at elevations of from three to twenty feet above the ground, and when hidden in a dense mass of creepers is difficult to see.

The eggs are usually three, sometimes four and rarely five,

and are indistinguishable from those of the other breeding Bulbuls.

The breeding-season is from the latter part of March until the end of August, and at least two broods are brought off.

Eggs vary in length from .96 to .77 and in breadth from .70 to .63, and average $.85 \times .65$. (See Plate V. fig. 13 of the April number.)

OTOCOMPSA EMERIA.

The Chinese name "Ko Kai Kwun" means the "high-crested lady."

This handsome Bulbul is a fairly common resident at Hong Kong, Macao, and on the coast generally, but it becomes less abundant inland.

Like the other two common species the Red-cheeked Bulbul is partly migratory, and large flocks are observed in the spring and autumn. Its song is most monotonous, and is repeated with maddening persistency.

This bird was not observed by Swinhoe in 1860 at Macao or Hong Kong, although he found it plentiful at Canton.

The nest is much like that of *Pyenonotus sinensis*, and is placed in similar situations, and the eggs are indistinguishable from those of that species.

The breeding-season is from March until August, and three is the most usual clutch. Eggs vary in length from '92 to '79 and in breadth from '69 to '59, and average '82 × '64. (See Plate V. fig. 20 of the April number.)

Anorthura fumigata.

This Wren was only once obtained. This was in the forest of Howlik, where it was hopping about on some dead branches near a stream. It had a note somewhat like that of a Grey Wagtail.

CINCLUS PALLASI.

One pair of these Dippers was found to frequent the stream which flows through the forest at Howlik, and they seemed 54

in habits and diet to closely resemble the common British species.

Eggs of this bird were not obtained, but a nest placed in the crevice of a rock overhanging the water closely resembled that of *Cinclus aquaticus*.

On July 5th, 1905, the female was shot, but the male never took another mate, so that this species is perhaps what might be described as a sporadic resident.

Myjophoneus cæruleus.

The Chinese Blue Whistling-Thrush is a common resident at Hong Kong, Macao, and on many of the small islands in their vicinity. The only place away from the coast in which it occurs is Howlik, about twenty miles from Samshui, where it is also resident.

This species has a great partiality for running water, far from which it is seldom found, although at times a dried-up nullah seems to attract it. When settling on a boulder it has a habit of suddenly spreading out its tail fanwise, which is very attractive. Its usual note is a low, mournful, but very penetrating whistle, repeated at intervals and quite unmistakable for that of any other species.

In the breeding-season the cock on rare occasions gives vent to a variety of whistling notes, which, although hardly amounting to a song, are very pleasing to the ear. When alarmed the cry is a shrill whistle, sharper and louder than the ordinary note.

The nest is a massive well-built structure, always largely composed of moss and rootlets, and lined with the aerial rootlets of *Ficus retusa* and a few dead leaves.

At Howlik the nest was usually placed under the caves of a small temple, and at Hong Kong on a ledge or other projection of masonry; under a bridge is a favourite situation, or an empty overflow water-pipe of sufficient calibre has been employed; but perhaps the site most preferred is one of the huge piles of granite boulders so common on the Kwang Tung coast, and when so placed it is practically inaccessible. Both at Howlik and at Hong Kong the nest has been found in a tree. This bird shews great partiality for certain nesting-sites, returning to them year after year.

The food of the allied species in India is said chiefly to consist of snails, but in Kwang Tung it is mainly of insects. It smashes the large Cicada (Cryptotympana recta) on a stone, after the manner of the English Song-Thrush with a snail.

The eggs are usually four, but not infrequently only three, and sometimes only two. In some clutches the bluish-green ground-colour is much more obvious than in others, and in some it is almost entirely overlaid by the reddish-brown markings. This species is double-brooded, the first clutch being laid about the middle of April and the second in June or July.

Eggs vary in length from 1.46 to 1.22 and in breadth from 1.03 to .95; whilst they average 1.36×1.00 . An example will be figured on Plate V. fig. 22 of the April number.

COPSYCHUS SAULARIS.

The Chinese name is "Chu shi cha," i. e. "Pig's Dung Bird."

The Magpie-Robin is one of the commonest birds throughout all the area under discussion. It is a resident, and is notorious for its partiality for human habitations and the vicinity of mankind.

Very popular with the Chinese as a cage-bird, for it is a fine singer, the nests are anxiously looked for on the West River, with a view to appropriation of the young.

This, a scanty affair of twigs, grasses, and aerial rootlets, is generally placed in a hole in a tree or building; but has been found on the top of a stump or in an old Magpie's or Grackle's domicile.

The Magpie-Robin is double-brooded, the first eggs being laid in April and the second clutches late in June or early in July.

This bird sings before daybreak in the spring, and at that

time of year a couple of cocks may often be seen furiously chasing each other, apparently for the possession of a hen.

The Magpic-Robin always has certain favourite perches from which it gives vent to its song during the breeding-season, and the use of which by any other species it always strongly resents. No bird objects more strongly to the approach of *Urocissa erythrorkyncha* than *Copsychus saularis*, and none attacks that predatory species with more vigour when it has eggs or young.

This bird is insectivorous, and to see it trying to get through the chitinous covering of the large Cicada (Cryptotympana recta) is very amusing. It is fond of spiders, and has been seen to make a swoop at one of the large solitary wasps (Pompilidæ) struggling with a big spider, which it promptly dropped, when Copsychus at once snapped it up! It was entertaining to see the wasp afterwards, carefully quartering the ground to see what had become of its prey!

Eggs vary in length from 1.01 to .83 and in breadth from .70 to .61, and they average .87 × .66. (See Plate V. fig. 14 of the April number.)

Prinia inornata.

The Indian Bush-Warbler is a common resident species in both Kwang Tung and Kwang Si, and breeds in May, June, July, and August.

Usually the nest in this part of the world is placed in reeds fringing the river-bank, or the muddy shores of some island in the Delta; but where reeds are not available bamboos and saplings at a height of about five feet are made use of. At Moto in the Delta so many of these birds breed in the reeds that almost a colony is formed.

Contrary to what is reported in India, five is the usual clutch and four is exceptional in south-eastern China.

After the breeding-season is over these birds frequent the scrub and undergrowth away from the river.

Eggs average 59×43 , and vary in length from 63 to 54, and in width from 47 to 41. They will be figured on Plate V. figs. 4, 5 of the April number.

Burnesia sonitans.

This Wren-Warbler is a common resident in both the Kwang Provinces: erceping about in the undergrowth and taking short flights from bush to bush, it makes a slight snapping noise. It breeds from May until August, and it is possible that as many as three broods are brought up in the year. The earliest date for fresh eggs was May, and the latest August 2nd.

The rapidity with which a brood can be hatched is well illustrated by the following:—

On May 15th an incomplete nest of this bird was found; this on June 1st contained two infertile eggs and three young, so that, at the outside, incubation does not take longer than about eleven days. The nest is placed in a clump of small bamboos, a few feet from the ground. One, however, was found built on the top of a new, but incomplete, nest of *Prinia inornata*, among reeds and right out in the shallows of the river, an unusual situation; it was copiously relined with dry grass, which extended above the hole, in contradistinction to what obtains in the case of *Prinia*.

The nests fall into two common types: both are bottle-shaped with the entrance-hole near the top, about six inches high and three wide; but one is built of coarse grass both inside and out, and the other is of flowering grass-heads and lined with the same. One nest was found which was made outside of skeleton leaves, a little moss bound together with cobwebs, and lined with fine grass-stalks.

The earlier clutches contain four or five eggs, but in the later ones three form a full complement.

Eggs are bright reddish chestnut, and measure from 62 to 54 in length, and in width from 48 to 43, and they average 59 × 45. One will be figured on Plate V. fig. 8 of the April number.

SUTORIA SUTORIA.

The Tailor-bird is one of the commonest residents, both on the coast and up the river, and its loud cry of "chink,

chink," so out of proportion to its size, is continually to be heard, both in gardens and in the woodland.

The most remarkable thing about this cheerful bird is its wonderful and beautiful nest, and as a great deal of time was spent in observation of it during nidification rather full notes are given on this interesting subject.

As all the world knows, the Tailor-bird makes a receptacle or bag in which to build its nest, by stitching together the free edges of one or more large leaves. In the majority of cases two large leaves growing near to one another are united to form a bag, but in a considerable minority the free edges of a single leaf of sufficient size are approximated, and in two cases three leaves were stitched together to receive the nest.

The first operation is to pierce the selected leaf or leaves, which the bird does with its bill, at a half to an inch from the free margins, always making a far larger number of holes than are subsequently threaded with the cotton strands.

The first stitch is invariably put in about halfway down the leaf, and the two edges are closely approximated by it, and this is done by knotting first one end and then the other of the cotton strand.

After placing the first stitch in position others are put in between it and the free extremity of the leaf or leaves in order to complete the bag, and it is rare for any to be inserted nearer to the stalk.

Having completed the bag the bird proceeds to fill in the tip of it with vegetable down, or at Hong Kong, where it is available, with soft brown material from the crown of the opening Sago-palm, and having thus made a solid base builds upon it a small round nest of very fine grass, and lines it with the down aforesaid and a few feathers.

Now, although at the completion of the leaf bag, the edges of the leaf or leaves are always closely approximated, when the nest has been built they are invariably widely gaping, the contained structure, so to speak, striving to burst through, so that it follows that the cotton strands must

contain clastic material, for no matter how much they stretch they never break.

The long axis of the leaf bag, with the nest in it, is always either horizontal or inclined at an obtuse angle to the ground, so that the whole is most beautifully waterproof in the heaviest tropical downpour, and the contents are, moreover, hidden from view from above, which tends to save them from Magpies and other winged marauders.

From careful observation of Tailor-birds in the grounds of the Naval Hospital at Hong Kong it appeared almost certain that a pair of birds always makes use of the leaves of the same plant in constructing the receptacle for the nest, and that those individuals which make it of two leaves on one occasion do not on another make it of one leaf, and vice versa.

No species is more easily alarmed or more readily forsakes an incomplete nest, and often it is sufficient to have looked at it from a distance of several yards to frighten the birds into beginning a new one.

The nest is not easy to see, though, as a rule, the white knots on the green of the leaf reveal its presence, especially when attention has been directed to a likely bush by the anxious calling of the Tailor-birds.

Almost invariably the nest is placed low down, at elevations of from one to three feet, very often in quite a small plant, and only twice was it seen as high as six or seven feet above the ground.

Like many resident birds Sutoria shews considerable preference for certain localities, so that the nest of one season is often placed at a distance of a few yards only from that of the previous year.

The leaves of the following plants are those most affected for making the receptacles for its nest:—Lisea polyantha, Callicarpa tomentosa, Ficus chlorocarpa, and the largest of the Melastomaceæ.

As is well known, the eggs of Sutoria are either bluish or white in ground-colour, with reddish markings, and it is

very curious that the white variety is exceedingly scarce on the coast, whilst the greenish variety is equally rare up the river and away from the sea.

The eggs of this species may be found from the end of March until August, but the majority are laid in May and June.

The average measurement of a very large number of eggs is '60 × '46, and they vary in length from '66 to '56 and in width from '47 to '43.

CISTICOLA CISTICOLA.

The Rufous Fantail Warbler is a common enough bird in the winter months in Kwang Tung, though owing to its retiring habits is not greatly in evidence. On April 13th there was a very heavy migratory movement and the elephant-grass on certain of the islands in the West River was swarming with these birds.

The note was thought to resemble that of a Whinchat, and was uttered from the top of a small bush during the breeding-season.

These birds are numerous early in the year in the Snipemarshes. At Kwei Hsien, in Kwang Si, numbers were found breeding in mid-August, and the nests appeared to be of the usual type found in India; they were constructed by drawing together the component stalks and blades of a tussock to make a sort of tube, and binding them with wild cotton or cobwebs. The bottom of the nest seemed always to have a good firm pad.

Five or six eggs, or young, were often found to be the usual clutch, and the larger number is apparently not found in India.

The pale blue unspotted phase of colouring in the eggs of this species apparently does not occur; but one elutch, so coloured but with the usual markings, was obtained.

Eggs vary from .63 to .55 in length and in width from ·47 to ·43, a large number average ·58 × ·45.

HENICURUS SCHISTACEUS.

The Forktail occurs only in the forests at Howlik and on the Tung On Rapids (fifty miles above Samshui), where it is a scarce resident, for two pairs only were observed at the former and one at the latter.

It is extraordinary how these little birds keep their long tails dry as they hop from rock to rock and eatch their insect prey in the spray of the mountain-streams. They have a strident, metallic, but not unpleasant note.

On May 21st, 1907, Mr. J. C. Kershaw found a nest of this species containing four eggs; it was situated on a ledge in a bank by the side of a stream, and was dripping wet. The nest was chiefly composed of moss and lined with skeleton leaves and a few dry grass-stalks, and closely resembled the description of those which this species builds in India.

Four eggs average $\cdot 87 \times \cdot 66$.

TROCHALOPTERUM CANORUM.

The Chinese name "Wa Mei" means "Painted Eyebrows." Of all the Hong Kong Thrushes this is by far the commonest, although from its skulking habits it is not greatly in evidence. In April and May, however, the number of these birds to be heard singing in the woods is remarkable.

Although the Chinese regard them as exclusively hill-dwellers, in Hong Kong they are quite as common near the sea-level as higher up in suitable localities. They were frequently heard in the grounds of the Naval Hospital, and just outside its boundaries their nests have been found.

Although the Laughing-Thrush sings in every month of the year at Hong Kong, its beautiful song is chiefly to be heard in April, May, June, and July, and the cock prefers, when singing, to perch on some slightly elevated position, such as a tree-stump or a small bush. At such times he seems to

lay aside much of his natural wariness, so that he is then easily approached.

The birds feed on insects, for which they may, by careful watching, be seen diligently searching in the scrubby bush which clothes so much of the Hong Kong hill-sides. When so engaged they give vent to harsh guttural chuckings, very unlike the tones of their songs. They make a considerable noise, scattering the dead leaves in all directions in the search for food, and by this may often be localized long before it is possible to see them.

They nest from the beginning of April until July, and undoubtedly produce two broods in the year. The nest varies considerably; sometimes it is a fairly neat, though lightly built structure, the outside being of coarse grass or of the leaves of a wild cane (Schizostadryum dumetorum), very common on the hill-sides, lined with finer grasses: or it is sometimes made almost entirely of pine-needles and lined with the same. As a rule, it is placed in a bush at an elevation of two or three feet from the ground, but not infrequently it is found almost on the ground itself, and is never seen at a greater elevation than about six feet.

This bird is a close sitter and does not leave its eggs until one is almost on the top of the nest; it then flutters off without any demonstration and disappears at once into the scrub.

The usual clutch appears to be of four eggs, for there was never a case in which a less number was found to have been sat upon, and more were never seen.

This species is extremely popular with the Chinese as a cage-bird; but although it is not to be found elsewhere in the immediate neighbourhood of Hong Kong than in the island itself, the suggestion that it has been introduced by the escape of caged individuals seems hardly justifiable. It is merely an example of the extraordinary localization of certain species in this part of China. It is a resident at Macao, and was heard at Wuchau and in the gorges

behind the Howlik Forest, but it is not at all common; it is obviously indigenous and not an escaped species.

Eggs vary in length from 1.09 to .97 and in breadth from .86 to .78, and they average $.99 \times .83$.

Pomatorhinus stridulus.

Pomatorhinus ruficollis Hodgs.; Sharpe, Cat. B. M. vii. p. 426 pt.

This Babbler, though uncommon, is widely distributed; a pair was obtained up the North River on May 9th, 1905, and another pair near Wuchau on March 23rd, 1906; whilst others were seen, or obtained, at Howlik, Tam Chau, and elsewhere.

This bird is shy, keeping to the scrub and low bushes; probably it is resident, as it has been found from January until August, and there is not much doubt that it breeds in Kwang Tung.

DRYONASTES CHINENSIS.

The Chinese Babbling-Thrush is a regular but rather scarce winter visitor to Heng Kong, where it is seldom seen, owing to its extreme shyness and its partiality for the thickest parts of the woods. It was not observed elsewhere.

The song of this species is quite unmistakable from that of any other bird occurring at Hong Kong, and heard at a distance is very melodious, if a trifle monotonous, consisting as it does of a few flute-like notes repeated at short intervals. It was not heard before April 23rd, nor was the bird seen sooner than May 5th, when an opportunity of observing a pair evidently about to breed occurred. This pair of birds, engaged in amorous dalliance, permitted themselves to be watched at a distance of a few yards for about ten minutes, and probably had only recently arrived.

There is no doubt that this species breeds at Hong Kong, although its nests and eggs have not been satisfactorily

identified there. Its characteristic song has been heard during April, May, June, and July; but after August it was silent. Although it is heard at all hours of the day, it prefers to sing before 8 A.M.

This species is a popular cage-bird with the Chinese, and the fanciers say that those they have for sale come from the Province of Kwang Si. The Hong Kong live-stock dealers call this bird "Shan Mo."

Dryonastes perspicillatus.

This Babbling-Thrush is a common bird all over the district under discussion, and its loud clear whistle is a sound which when once heard in the woods of Hong Kong is not easily forgotten. They usually go about in small parties of from four to a dozen or a dozen and a half, and this arrangement seems to hold good even in the breeding-season.

It is said by Abbé David that this bird will attack and devour the young of other species, but this was not observed by the writers. It appears chiefly to live on insects.

The young birds remain with the parents, being fed by them until they are quite well grown.

The nest is frequently placed in a bamboo at a height of about twenty feet from the ground, but it has been noticed at not more than five or six feet. It is a well-made structure of dry grass, lined with finer grasses or even with pineneedles, and has a good deep cup.

The pale blue eggs are usually four in number, but three are sometimes sat upon.

Eggs may be found from early in March until August, so, no doubt, this species is doubled-brooded.

Eggs average $1.10 \times .83$, and vary in length from 1.16 to 1.01, and in width from .90 to .80.

DRYONASTES SANNIO.

This Laughing-Thrush is a resident, but not a common one, and its extremely secretive habits and fondness for thick scrub in deep valleys and on steep hill-sides makes

it far from easy of observation. It was observed at Tam Chau, where, in a ravine at the foot of the hill on which the monastery stands, two immature birds were obtained.

The bird is shot with difficulty, because it sticks to the undergrowth, and when flushed drops with closed wings after the shortest possible flight.

The call is like that of *Dryonastes perspicillatus*, but is more musical. A nest was found in a thorn-bush at Wu Shek, on the North River, which in architecture and materials exactly resembled that of *Dryonastes perspicillatus*. These birds also breed at Howlik, but no nests were discovered there.

Two eggs average $1.04 \times .76$.

TIMELIA PILEATA.

The Red-headed Babbler is an uncommon resident at Tak Hing, forty miles below Wuchau, on the borders of Kwangsi and Kwang Tung, and is found nowhere else on the West River.

On May 3rd, 1907, a nest of this species containing four eggs was discovered in a ravine full of flags, the female bird flying to it and thus betraying the secret. This nest, which was about a foot from the ground and ill-concealed, was placed among rank herbage, and so loosely put together that it almost dropped to pieces when removed; it was domed and had an entrance-hole at one side.

PYCTORHIS SINENSIS.

The Orange-eyed Babbler is a rare resident on the West River and was most frequently observed at Tak Hing, but also at Tam Chau and Wuchau in Kwang Si.

Nests of this species were found on May 30th and August 3rd, and in both cases were placed against the main stem of a large reed, supported by several small twigs; they were easy to see. The one discovered on May 30th contained three young and an infertile egg.

The birds at the nest were noisy and aggressive, and ser. x.—vol. 1.

frequently hung on to the reeds, upside down reminding one of the Bearded Tit.

The nest found on August 3rd was not completed, and was made entirely of dead reeds and bamboo-leaves, bound together by cobwebs and vegetable silk. It was small and had a deep cup.

STACHYRIDOPSIS SINENSIS.

Stachyridopsis sinensis O.-Grant, Ibis, 1907, p. 184.

Mr. J. C. Kershaw obtained an example of this species at Lok Yum, near Howlik, on April 11th, 1907, where in company with another it was threading its way quickly through the undergrowth. This specimen was a male with well-developed testes. Subsequently on May 1st, 1907, Mr. Kershaw saw a party of half a dozen of these birds near Howlik and shot one, but failed to pick it up among the thick undergrowth.

ALCIPPE HUETI.

Alcippe nipulensis (Hodgs.); Sharpe, Cat. B. M. v. p. 620 pt.

This bird appears to be resident in Howlik Forest; it is very noisy, with several loud notes, one of which resembles a Tit's trill. In habits it rather resembles a Tailor-bird.

In the winter these birds go about in little parties, but by May they are paired, and nesting begins about the second week of that month.

A nest found on May 27th contained three fresh eggs; it was slung from the underside of a frond of fern on one side, and from some bamboo-grass on the other, and it was made of dead leaves and reed-blades, bound together with the black stems of bracken. The egg will be figured on Plate V. fig. 2 of the April number.

The nest was marvellously well concealed and very hard to find. It was discovered by Mr. J. C. Kershaw.

LIOTHRIX LUTEA.

This bird was seen by Mr. J. C. Kershaw at Lo Fu Shan, about twenty miles from Canton, and it has been observed

on two other occasions, once at Hong Kong in May and once at Kowloon in April. It is a common cage-bird at Hong Kong, and it is possible, though not likely, that the birds seen had escaped from captivity.

PARUS CINEREUS.

The Indian Grey Tit is a common resident species at Hong Kong and on the Kwang Tung coast, but away from the sea its place to the west and north is taken by what has been called *Parus commixtus*. The borders of their respective territories lie near Howlik, where the Delta and creek country comes to an end, and the hills begin. In this region the two interbreed, and were obtained on those terms of tender intimacy which are supposed to indicate *identity* of species.

This bird nests early and two broods are probably reared in the year. A party of young with their parents were seen as early as the first week of March, but eggs have not been taken before the 10th of that month. Second clutches are found during the first half of May.

Very large clutches are not found; six or seven is usual for first, and five for second layings.

The nest exactly resembles that of *Parus major* and is placed in similar situations.

LANIUS SCHACH.

This handsome Red-backed Shrike is very common both up the West River and at Hong Kong and Macao, and is resident throughout this part of China.

The resident birds are largely augmented, however, by the arrival of migrants from the north in September, and these, after dawdling for a week or two, proceed further south again. At this time, in the Delta country, many of these Shrikes can be seen perched on the swaying reedtops. The bird is very noisy, but less so in the autumn months than in the spring and summer. Perched on the top of a small tree or a large bush, it gives vent to a series of harsh guttural notes, which are peculiar and characteristic, without being pleasant to the ear.

At times in the spring this Shrike can produce a variety of notes almost amounting to a song, and it is also an admirable mimic. One individual was heard to imitate the Mynah, Grackle, Magpie, Francolin, and Blackheaded Bulbul. The Francolin and Mynah are often imitated, and wonderfully well. The Francolin sometimes replies to the Shrike's challenge.

This Shrike does not keep a larder, though one was once observed to jab a small lizard on a spike of bamboo before eating it.

The nest is a deep well-made cup of coarse grass, often with a few flowering heads outside, lined with finer grasses. It may be placed in a variety of trees at elevations of from three to twenty feet or more. Up the West River evergreens and fruit-trees are favoured, and bamboos are used occasionally, but in Hong Kong the nest is often in a fir-tree.

The eggs are laid from about mid-April until well on in June, and there is little doubt that this species is double-brooded. Four or five is the usual clutch, but six have been obtained, and on one occasion a nest was found containing five eggs of the Shrike and one of the common Dove of the country.

As in the case of *L. collurio*, the eggs are of two varieties, a reddish and a greenish, and the former are much the rarer on the coast; out of forty eggs taken at Hong Kong only one was red. Up the West River the red phase predominates.

Eggs vary in length from 1.08 to .91 and in width from .81 to .72, and average $.99 \times .75$.

LANIUS FUSCATUS.

The Black Shrike is much less common than Lanius schach. It is more abundant on the coast than up the river and has not been observed at all in Kwang Si Province. No less than five of these birds in various localities were

watched, and for several years they never mated and were always found at the same places. At Hong Kong a pair was seen at Wan Chai Gap in June, but no nest was found.

In October 1902, at Crooked Island, Mirs Bay, this species was found to be abundant and a good many were obtained, including some immature birds.

This Shrike has the same fondness as L. schach for sitting on the top of a stake, bush, or tree and giving vent to what almost amounts to a song and to imitations of other birds. The notes are less harsh than those of L. schach. It feeds chiefly on the ground, picking up various insects.

On May 9th a Chinaman found six eggs which he declared to belong to this species, and as he knew exactly what he was looking for, he was probably right.

The eggs are like those of L. schach in point of size, but the ground-colour is white and the ashy-coloured markings are more scanty. They average 92×73 .

LANIUS CRISTATUS.

These Shrikes pass through twice a year on migration, but do not linger on their passage; they are seen in April and early May and again in September. A young bird was obtained at Kowloon in February 1902 in bitterly cold weather.

LANIUS SUPERCILIOSUS.

This Shrike is an occasional spring and autumn migrant; it is seen in small numbers some years, and in others is not seen at all. On passage to and from its breeding-grounds its movements are quite leisurely.

LANIUS LUCIONENSIS.

The Philippine Shrike is resident in a few favoured localities, but chiefly occurs on passage in the spring and autumn, being especially noticeable at the former time of year.

April 11th is the earliest recorded date, and from that

time onwards a few may be seen daily until May, when about the middle of that month immense numbers have been observed passing through Hong Kong.

As a breeding species this Shrike is confined to Shau Kwan on the North River, where it is fairly common, and to Tak Hing on the West River, where about three pairs breed. It is probably not double-brooded, and eggs may be found from the middle of May until June. Four or five is the usual clutch, but as many as seven have been found.

The nests in south-eastern China are always at a considerable elevation, from thirty to sixty feet, and are placed in fruit-trees and banyans, sometimes well hidden and sometimes quite conspicuous.

This bird has not been found to have a "larder" like L. collurio.

This region is perhaps the south-eastern limits of this bird's breeding-range, for it is known to nest in north-eastern China and on the Yangtze, so that it has a large north and south breeding range. The egg will be found figured on Plate V. fig. 18 of the April number.

LANIUS COLLURIOIDES.

At Tak Hing, on the borders of the two Kwang Provinces, two pairs of these birds were found nesting, and this species occurs also in Kwang Si, but is not common there.

On May 31st, at Tak Hing, a nest was found in course of construction and on June 19th it contained four eggs very highly incubated. This nest was in a small fir-tree against the trunk and about seven feet from the ground. It was made externally of flowering grass-heads, and was lined with fine grass-stalks. At the nest neither of the birds made any sound.

On June 3rd, Staff-Surgeon C. G. Cortis Stanford, R.N. took two single eggs from different nests. The eggs from the first nest mentioned above are larger than those of the other two.

At Tam Chau a pair of these birds was seen feeding three fully grown young on July 12th.

The two eggs mentioned above are of different types and measure $.76 \times .66$ and $.82 \times .63$ respectively, and in colour one is of a pale greenish white spotted all over, chiefly at the larger end, with pale ashy, purplish, and yellowish brown, whilst some spots are over-spotted with darker colour; the other has the ground-colour yellowish white, the markings as in the first case but collected at the smaller end and more confluent. The egg will be figured on Plate V. fig. 15 of the April number.

LANIUS TIGRINUS.

At Wuchau and Samshui, a few of these birds were seen in April and May, and on one occasion an immature specimen was obtained at Kowloon in February.

At Tam Chau, Kwang Si, an immature bird was shot on August 14th; so perhaps they breed in the western Province.

ÆTHOPYGA LATOUCHII.

Æthopyga latouchii Slater, Ibis, 1891, p. 43.

This handsome Sunbird occurs only in Howlik Forest and as a winter visitor. It has a peculiarly loud metallic note, and haunts the topmost boughs of very tall trees.

Zosterops simplex.

Zosterops palpebrosa (Temm.); Gadow, Cat. B. M. ix. p. 165 pt.

The Chinese White-eye is a very common resident, both on the coast and inland. It is usually to be observed in small parties throughout the summer months, and in the winter very often in considerable flocks; when in company they search diligently all day on and under the leaves of the banyan and other trees for their insect food to a loud and cheerful accompaniment of the notes "chee! chee"! When flying from one tree to another they also continually call "chee! chee!": but they appear to have no song.

These birds are greatly in favour with the Chinese as eagebirds; they take them from their nests whilst unable to fly, and having placed them in a cage hang it near the original nesting-site, so that the old birds come and feed their offspring until the latter are able to take care of themselves.

The first nests of this species at Hong Kong are built in the beginning of March, and as others continue to be made until August, there is no doubt that several broods are reared in a season.

The situation of the nest is frequently the outer end of a horizontal bough of a banyan-tree, where, slung underneath the finest twigs and surrounded by leaves, it is most difficult to see. It can also be found in various other trees, always well hidden and often at a considerable elevation. Small, beautifully made, quite round, and fairly deep, it is a charming structure, composed externally of fine grass or weeds, mixed with cotton, and lined with a variety of materials, such as very small pine-needles, horsehair, or the finest grasses and weeds.

The eggs vary from four to two in number, and are usually pale blue, but are sometimes quite white; they are a favourite article of diet with the Blue Magpie.

Eggs average $\cdot 63 \times \cdot 46$, and vary in length from $\cdot 71$ to $\cdot 55$ and in width from $\cdot 44$ to 50.

DICEUM CRUENTATUM.

This Flowerpecker is a fairly common resident both on the coast and up the West River; but it is commoner on the coast and is not seen above Wuchau nor on the North River. These birds, in the winter time, are seen singly or in small parties, and their peculiar "chink" of a note calls attention to them at once. They hunt for insects, frequently at the tops of very high trees, and are so rapid in their movements that they are difficult to see. In addition to the loud "chink," the male of this species has a feeble little song.

These birds pair in February, and their nests have been found at various dates from June 17th to August 19th.

They are usually placed at the end of a branch and high up; the earlier ones are made of strips of very fine bark or fibre, matted together with cobwebs, but those built later on are often composed of the cotton of the bombax tree, and being white in colour are fairly easy to see.

The nest is a pear-shaped structure, about four inches in depth, with an entrance-hole about halfway down one side, which is seven-eighths of an inch in diameter and wrapped round with cobwebs. Only one egg was obtained; the nests usually contained young.

On June 17th a female of this species was seen building a nest, and she apparently did so unaided by the male. She was carrying little pieces of fibre to the nest, and so quickly did she insert each portion that it looked exactly as if she were carrying insects to feed her young ones with.

DICEUM INORNATUM.

This Flowerpecker, the smallest bird in south-eastern China, is a fairly common resident at Tam Chau and near Howlik, but does not occur on the coast.

These birds have very loud voices and their notes at once call attention to them, although from their habit of hunting round the tops of the highest trees and their small size they are most difficult to see.

Probably this species breeds in April, judging by the highly developed testes of the males in that mouth. All endeavours to discover the nest failed.

MYZANTHE IGNIPECTUS.

Diceum ignipectus (Hodgs.); Sharpe, Cat. B. M. x. p. 41. On February 8th a male of this species with highly developed testes was obtained in the Garden of the British Yamen in the centre of Canton City. There was another bird with it, which may have been its mate.

This little bird has a note resembling that of *Dicæum* cruentatum, but it also possesses an additional little trill. In other habits this species resembles *Dicæum*.

Two pairs of these birds were breeding at a place near

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Howlik, but the cover is dense and the trees are very lofty, and the nests could not be located.

On June 8th it was heard at Macao and on the 12th at Wing On, twelve miles from Samshui, so that it is fairly well distributed.

CHELIDON LAGOPUS.

On March 16th, 1967, in the Happy Valley at Hong Kong, large numbers of the House-Martin were seen in company with *Hirundo gutturalis*. This is the only occasion on which these birds were seen at Hong Kong.

It is difficult to explain these unusual irruptions of birds, but perhaps the dense fog, so common at Hong Kong in the spring, or the encountering of a typhoon, may well cause a species on migration to change its usual course or to come down to earth when under normal conditions it would not do so.

COTILE RIPARIA.

Sand-Martins occur both on the West and North Rivers on their spring and autumn passages, but in spite of many apparently very suitable localities they never stay to breed. They are often in company with *Hirundo gutturalis* and sometimes with *Hirundo striolata*. They pass on their way north in April and May, and on the return journey from early in September until the end of October.

Cotile sinensis was never obtained, though carefully looked for.

HIRUNDO GUTTURALIS.

Eastern Swallows appear at Hong Kong about the 8th or 10th of February, as a rule. They leave again in the first or second week of August.

These Swallows nest, as a rule, under the caves of native houses, and as they are believed to bring good luck are carefully protected by the Chinese at Hong Kong, but inland apparently the Celestial idea is that they are unlucky.

These birds are double-brooded; the earliest eggs were taken in March, while second clutches are laid in June.

At Hong Kong, although the birds which breed locally leave in August, an occasional flight has been seen in November, and after a severe typhoon in September numbers were observed flying aimlessly about the Naval Hospital.

The usual clutch of eggs is five or occasionally six, and they vary in length from $\cdot 74$ to $\cdot 65$ and in breadth from $\cdot 54$ to $\cdot 49$, and average $\cdot 70 \times \cdot 52$.

The eggs do not differ from those of the common European Swallow in colour and markings.

HIRUNDO STRIOLATA.

The Mosque-Swallow is a very common summer visitor to some parts of the West River, but in the eastern part is only found breeding under the curiously carved eaves of the temples of the monastery at Howlik at an elevation of 1500 feet above the sea.

In Kwang Si Province, however, this species takes the place of *Hirundo gutturalis* and breeds at lower levels.

At Howlik it was observed that only about one bird in ten made the retort-shaped nest, supposed to be so characteristic of this species, and whilst some were quite open, like those of the House-Swallow, others resembled those of the House-Martin in being closed above. The nests are lined with grass and a few feathers, but the first egg is often laid on the clay of the outer wall and a lining added during incubation.

There are at Howlik small boards, placed under the birds' nests, to prevent their droppings from falling on the monks as they pass beneath.

It is thought that sometimes pairing takes place inside the nests, which are very spacious. The monks consider these birds to be sacred; but although they protect them from the Chinese, they made no attempt to do so from Europeans.

The usual number of eggs is three or four, but occasionally five are found.

The eggs are white and without much gloss; in some rare cases a few faint reddish spots are to be noticed at the larger end. The birds are double-brooded.

The Mosque-Swallows usually arrive in large flocks early in March, but a few have been seen as early as January. They leave again between the middle of September and the end of October, but some linger on into November and December, the latest date being the 22nd of the lastnamed month.

Possibly these very late birds are those which have nested only a little further north. Prior to migration they settle in vast numbers on telegraph-wires and other suitable perchingplaces in the same manner as the other Swallows.

Building begins at the end of April, and nests containing eggs in all stages of incubation, and in a few cases young birds, were found on June 3rd.

Eggs vary in length from '85 to '69 and in breadth from ·62 to ·58; they average ·77 \times ·60.

[To be continued.]

V .- Notes on the Birds collected by the B.O.U. Expedition to Dutch New Guinea. By W. R. OGILVIE-GRANT, F.Z.S., M.B.O.U.

THE following account of the birds brought home from New Guinea by the B.O.U. Expedition has been reprinted, by the kind permission of Messrs. Smith, Elder & Co., from the Appendix A to Mr. A. F. R. Wollaston's volume, 'Pygmies and Papuans,' which contains the official account of the Expedition. As it was thought that this account might not come under the notice of all the Members of the Union, it has been considered advisable by the Editor to reproduce it in the 'Ibis' with a few additional notes and slight alterations. When Mr. Wollaston, who is accompanied by Mr. C. Boden Kloss and five trained Dyaks, returns with large additional collections from the second Expedition, it is intended to draw up a complete account

